

The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



Volume #53, Issue 11

Since 1958

November, 2011

Meeting:

November 12, 2011

Location:

San Bernardino County
Museum, 7:00 p.m.
Redlands, CA. California
St. exit, I-10 Fwy.

Pre-meeting Dinner, 5:00
p.m.,

The Sizzler
1800 So. Waterman
Ave.
San Bernardino, CA

After the meeting telescopes
will be set up for viewing
and members will be
available to answer
questions. Bring your
telescope to observe with us.

*No telescope is too humble,
and beginners are always
made welcome!*

After viewing the group will
head for Coco's in Redlands,
Tennessee exit, I-10 Fwy.

Program

The Moon

Our feature presentation will be a video titled, "The Moon." This is an episode from the wonderful Universe Series that airs on the History Channel. The video describes the moon in all manner of detail, especially as to the various theories of its origin.



The moon is a favorite and fascinating object to observe. Discover what caused its surface to be the way it is. See what the Apollo astronauts found and find out what future plans may hold in store, should we go back to the moon.

Learn all about our nearest neighbor in space and see some incredible animations about how it came into being.

SBVAA Officers

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Calendar of Upcoming Events

November 12, Club meeting at the Museum

November 26, Star Party, Johnson Valley

December 3, Club holiday get together at

Shakey's Pizza
836 W. Colton Ave.
Redlands, CA
Time: 3:00 to 6:00 p.m.

December 26, Star Party, Johnson Valley

* * * Special Notice * * *

Our **2011 Holiday Get-Together** Has Changed!

The correct Date Time and Place is:

December 3rd, 2011 between 3 and 6 pm.

Shakey's Pizza in Redlands

836 W. Colton Ave, Redlands, CA 92374,

Tel. 909-793-5993

The menu will be pizza, chicken and mojo potatoes

The Club will buy the main entree 🍷😊

Members and Guests buy your own Drinks, Salads, etc.

There will also be a White Elephant Gift exchange.

Editor's Notes

By Jim Sommer

Well, between Tom's e-mail notice and the above notes, you're probably well aware that the club's annual holiday party location has changed. Alas, Roberto's is no longer in business; thus the change to Shakey's in Redlands. You need to be there at 3:00 sharp because we won't have the extra time we had at Roberto's.

By the time you get this newsletter the club will have had two, yes TWO, star parties on October 29. One at Afton Canyon and one at the Wildlands Conservancy site in Oak Glen. This will be the second time we have used the Wildlands Conservancy site. It is located right next door to Los Rios Rancho and may prove to be a good alternate site with reasonably dark skies (considering its semi-urban location) for near by star parties. Good news for those who can't or don't wish to drive a long distance for a star party.

November is upon us and with it comes the dark, clearer skies of the late fall and winter observing season. Break out your long johns, winter coats and caps and get ready for those long, cold winter nights. The long nights and winter constellations make for the best observing of the year. Try to make time for a trip to a dark sky site -- Johnson Valley, Joshua Tree, Afton Canyon or your favorite "secret" location. What better gift could you give yourself this year?

For the next several months The Observer will offer a column highlighting the Carnegie Observatories and some of their activities both historic and current. The names of George Ellery Hale and Edwin Hubble are inextricably linked with The Carnegie along with Baade, Adams, Joy, Sandage and a host of other luminaries of astronomy.

I hope you will enjoy reading about this very important institution.

CALENDARS

The 2012 "Deep Space Mysteries" calendars from Astronomy Magazine are here. It will be available for sale starting with the club meeting on September the 25th. We have 40 for sale on a first come first served basis. The retail for this calendar is \$12.95 plus \$1.00 tax or \$13.95 altogether. Your cost, through the club this year, is \$8 a savings of \$6. See Fidel, the club treasurer, at the back of the room to make your purchase. Reservations are accepted.



Lovely photo of M33

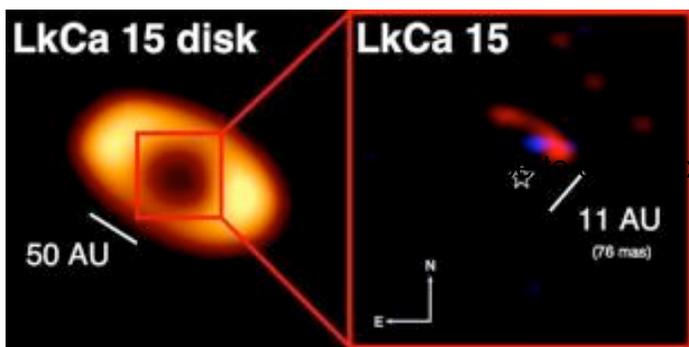
Astronomers Spot The Birth of a Planet

By: Brian Owens, News Blog, Nature.Com

Astronomers have for the first time imaged a planet so young that it's still packing on the pounds from its birth site, a disk of gas and dust surrounding a star 450 light-years from Earth. The hatchling's age, estimated mass and distance from its parent star support one of two competing models for planet formation.

“This may be the first time we have been privileged to see such a young protoplanet — it is like being able to look at the babies in the maternity ward of the local hospital, instead of looking at the rest of the patients, middle-aged and beyond,” says theorist Alan Boss of the Carnegie Institution for Science in Washington DC, who was not part of the study.

Adam Kraus of the University of Hawaii at Manoa and his colleague Michael Ireland of the Australian Astronomical Observatory in Epping, homed in on the youthful, sunlike star LkCa 15 because the planet-forming disk of gas and dust swaddling it has a special property: the disk has a large gap in the middle of it, which could be a sign that the gravity of one or more orbiting planets has cleared away material.



Kraus and Ireland, who reported their findings on 19 October 2011, went searching for a planet in the gap using the large Keck-II telescope atop Hawaii's Mauna Kea. Young exoplanets had never been imaged because telescopes typically lack the resolution to pick out faint planets that lie near the blazing light of their youthful parent stars, and

because of the distortion caused by Earth's turbulent atmosphere.

To overcome these problems, the astronomers inserted a mask with holes in it into the telescope's optics, which allows a small but carefully chosen fraction of the light from LkCa 15 to enter the observatory. The distance between any pair of holes in the mask is never the same, which enables observers to determine which light paths are affected by a particular atmospheric distortion and to cancel the distorting effect.

Using the method, Kraus and Ireland recorded a compact object in the gap with an estimated mass between that of Saturn to several times that of Jupiter (pictured). But the body has a much bluer colour than predicted — an indication of a higher than expected temperature. Observations also revealed the presence of dust in the gap.

Kraus and Ireland say the observations indicate that they have not only captured the first portrait of a young, two-million year-old giant planet, but that surrounding dust and gas are falling onto the body, heating the orb up as they does so.

The young planet lies roughly as far from LkCa 15 as Uranus does from the Sun — a relatively remote region where material in the planet-forming disk would be expected to be sparse even before it was cleared out. In fact, the density of gas and dust would be so thin where the giant planet formed that its core could not have been built up by the gradual accumulation of rocky material, a process known as core accretion. Instead, says Kraus, the planet's existence favors the gravitational instability model, proposed by Boss, in which a large mass of gas and dust in the outer part of the disk suddenly forms into clumps as big as a modest-size planet, drawing in neighbouring gas and dust to form a giant planet in just a few hundred years.

For complete info go to:

http://blogs.nature.com/news/2011/10/astromers_spot_the_birth_of.html

The Carnegie Observatories

For Over a century the Carnegie Observatories have been a world center of astronomical research. Although relatively small, the Observatories' staff has had a disproportionately large impact on the course of astronomy and continues to lead the search for answers to fundamental questions about the size, structure, and composition of the universe.

George Ellery Hale established the Observatories in Pasadena in 1904 and built the 60" and 100" telescopes on Mount Wilson, each the largest in the world at its completion. It was on these instruments that Carnegie astronomer Edwin Hubble discovered and first described the expanding universe. In 1969, the focus of Carnegie observations moved to Las Campanas Observatory, set high in the southern reaches of Chile's Atacama Desert.

Today, Carnegie astronomers study light collected from the clear skies above Las Campanas by the massive Magellan telescopes, twin 6.5 meter mirrors that are among the largest and most efficient reflectors in the world. Las Campanas



has also been selected as the future home for the Giant Magellan Telescope which will be far larger than any telescope ever built, will produce images 10 times sharper than the Hubble Space Telescope, and will help to answer many of the questions at the forefront of astrophysics today.

The Carnegie Observatories is one of six research departments of the Carnegie Institution for Science.

Star Party: Wildlands Conservancy. Oak Glen

By Jim Sommer

Saturday night, October 29, About twenty of your fellow club members went "up the hill" to the Wildlands Conservancy site next door to Los Rios Rancho. I got there a bit late and had to set up in the dark but I believe there were about a dozen scopes set up. And a nice variety of scopes too -- a 70mm refractor up to a couple of 12" Dobs and a various apertures in between.

Early in the evening the seeing was only about a 5/10 but as the evening progressed the air settled down to be what I would estimate to be a 7/10. Transparency was very good. I would rate it at a 7 or 8/10. Martin ran a couple of dark sky readings and found it was right around a 20 -- darker than Forest Falls.

The waxing crescent Moon was setting and great views along the terminator were enjoyed by all. As the Moon started to set below the nearby ridge we were treated to the silhouette of trees across the face of the Moon. A very pretty sight indeed.

While we waited for Jupiter to rise into steadier air we tested the site conditions on several old friends. The Ring Nebula was easily seen even in the little 70mm. M31 was, as always, stunning and M32 and M110 easily visible. The Double Cluster was also well placed and looked like diamonds spread on blue-black velvet. Alberio, M33, and several NGC DSO's were bagged as well.

We closed down about 2230 but the Conservancy's ranger would have been happy to have us stay longer. This site is really very good, especially for a semi-urban location. The surrounding ridges help to mask the ambient sky glow from the San Bernardino valley and there is little extraneous glow from the north and east. The set up area is paved and there are restrooms close by. This is a great local, alternative site.